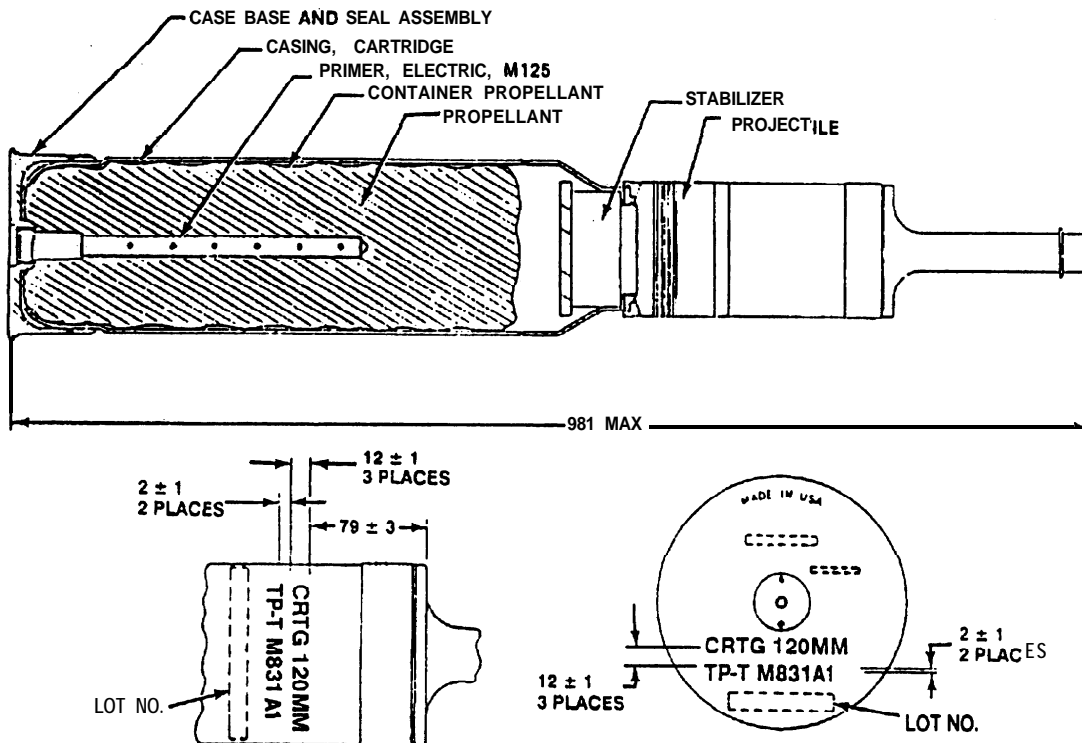


**CARTRIDGE, 120-MILLIMETER: TP-T, M831A1**

U  
AR 4709-A

**Type Classification:**

STD - April 23, 1993.

**Use:**

The M831A1 cartridge is a fixed 120-mm target practice round with tracer (TP-T) which simulates the ballistics of the High Explosive Antitank Multipurpose with tracer (HEAT-MP-T) M830 cartridge. The M831A1 cartridge with inert projectile is intended for use in the 120-mm smooth bore M256 cannon.

**Description:**

The external appearance of the M831A1 cartridge is similar to the M831 training round as well as the M830 service round. The M831A1 round consists of an inert projectile composed of a steel spike, aluminum body, ring, stabilizer and nylon obturating band. The fin and boom on the present M831 have been replaced by a stabilizer with six equally spaced slots which impart spin to the M831A1 projectile. The combustible cartridge case, combus-

tible case cap, case base and seal assembly are the same components used on the presently fielded M830 and M831 cartridges. The internal propulsion system for the M831A1 consists of M125 primer, M14 propellant, and tracer.

**Functioning:**

The M831A1 is loaded and fired in the normal manner from the 120-mm M256 smooth bore tank gun. Initiation of the electric primer ignites the propelling charge and combustible case, generating gases which drive the projectile from the gun and ignite the tracer. The silicone rubber seal and nylon obturating band as well as the case base and seal assembly prevent gas leakage during the projectile travel in the barrel. The obturating band and bourrelet also function to maintain projectile in bore centering and integrity. The stabilizer provides spin for flight aerodynamics. The flight characteristics simulate those of the service round, but do not result in an explosion or penetration upon target impact.

**Tabulated Data:**

Complete round:

Type ----- Fixed, TP-T  
 Weight ----- 50.5 lb (22.9 kg)  
 Length ----- 38.62 in.  
 (981 mm)  
 Assembly drawing ----- 12944397

**Temperature Limits:**

Firing:

Lower limit ----- -25°F (-32°C)  
 Upper limit ----- +125°F (+52°C)

Storage:

Lower limit ----- -50°F (-46.0°C)  
 Upper limit ----- +145°F  
 (+63.0°C)

**Performance:**

Chamber pressure ----- 55,000 psi @  
 70°F, 73,000 psi  
 @ 145°F  
 Velocity (nominal) ----- 1140 m/sec  
 (3740 ft/sec)

**Packaging:**

Packing and marking  
 drawing (metal container) -- 12521674

Dimensions ----- 44.5 x 7.75 x  
 7.75 in.

Cube ----- 1.5 cu ft

Total weight (with cartridge) - 73 lb

Total explosive weight ----- 15.5 lb

"Packing" ----- 1 round per  
 metal container;  
 30 metal con-  
 tainers per pal-  
 let

\*NOTE: See DOD Consolidated Ammunition  
 Catalog for complete packing data including  
 NSN's.

**Shipping and Storage Data:**

DOD hazard class ----- 1.3

Storage compatibility group -- C

Field storage category ----- A

DOT shipping class ----- B

DOT designation ----- AMMUNITION  
 FOR CANNON  
 WITH EMPTY  
 PROJECTILE

UNO serial number ----- 0417

DODAC ----- 1315-C784